

Fire alarm installation to be undertaken by Rex Fire option number 2. Rex shall be a nominated specialist sub contractor to the electrical contractor, contact Mark Naylor on 01142754278 for quotation number MN/Q2899 option 2.

Intruder alarm installation to be undertaken by Delta Security option number 2.DS, shall be a nominated specialist sub contractor to the electrical contractor, contact Dave Stamp on 07966794939 for quotation number 0214-041 option X

Lighting to be Profile contact Jerry Barnard for quotation tel no 0750062409.

Existing 100amp spn electric supply cable to be disconnect at the existing steel feeder pillar, pulled back and jointed and run new cable to new flush box meter cabinet.

VISITING THE SITE

The Contractor shall be deemed to have examined the drawing and visited the site, and have acquainted himself with local conditions, nature of the ground, access to site, working and storage space and the execution of the works generally. No claim for extras will be admitted for errors or omissions arising from the Contractor's failure to satisfy himself on these matters.

Tendering Contractors should contact the Maintenance Section, Tel. 01724 296713 for an appointment to visit the site and should under no circumstances visit the site without appointment.

SETTING TO WORK

All material shall be installed in a neat and workmanlike manner under skilled supervision and to the complete satisfaction of the Property Services Manager.

The Electrical Installation work includes the supply, installation, complete testing and commissioning of all electrical equipment and apparatus which though not supplied by the Electrical Contractor, has electrical connections. The Electrical Contractor shall allow in his tender for full attendance during the testing and commissioning of all equipment connected with the installation.

The purpose of such attendance is to provide every assistance to the Property Services Manager's Representatives during the preparation and carrying out of such functional tests and adjustments as are deemed necessary for the satisfactory setting to work of the whole or any part of the complete works.

SCOPE OF CONTRACT

The Electrical Services throughout shall comprise the supply, installation, testing and commissioning of all switch gear, cables, distribution boards lighting and power equipment, Fire and Intruder Alarms, I.T. equipment etc. as detailed in the Specification to render the electrical installation operational.

REGULATIONS

The whole of the installation where appropriate shall comply with the Regulations for Electrical Installations 16th edition issued by the Institute of Electrical Engineers and any special requirements of the supply authority, Fire authority and insurers.

LABELLING OF CIRCUITS

The Electrical contractor shall allow in his tender for the full and adequate labelling of all circuits using semi-rigid plastic labels screw fixed to the lid of the distribution board.

SYSTEMS OF WIRING

Except where otherwise specified the whole of the wiring is to be carried out in P.V.C. insulated and sheathed cable chased flush in the carcass of the building all as shown on the drawing.

All runs are to be agreed with the Property Services Manager's representative prior to commencement on site.

CUTTING AWAY AND MAKING GOOD

All cutting away and making good shall be carried out by the main building contractor but the electrical sub-contractor shall allow in his tender for all marking out where necessary.

CABLES AND WIRING

The PVC insulated cables shall be 600/1000 volt grade BASEC approved with all earths being sheathed with green/yellow earth sheathing and the sizes to be used for the various sub circuits shall be as follows:-

Lighting	1.5mm <sup>2</sup> PVC Twin with C.P.C
Ring Mains	4mm <sup>2</sup> PVC Twin with C.P.C
Radials	2.5mm <sup>2</sup> PVC Twin with C.P.C
Cooker	6mm <sup>2</sup> PVC Twin with C.P.C

MOUNTING HEIGHTS

Lighting sub-switches generally 1200mm (to top) above finished floor level, socket outlets to be mounted 150mm above a working surface and 450mm (to top) above finished floor level in compliance with Approved Document M - Access and Facilities for Disabled People (Revised 1999).

MAINS POSITION AND DISTRIBUTION BOARD

The electrical contractor shall allow in his tender for the installation of a spn distribution board Square D, to be complete with switch disconnector's and McB's / RccBs, as shown. Take 16mm PVC/PVC double insulated tails from external meter position to terminal of dis board, protect cables through structure.

SPECIFICATION NOTES

SWITCHES

All sub-switches in the lighting circuits shall be as manufactured by MK Electric Ltd. Logic Plus range, mounted in the appropriate flush box to suit the accessory used.

SWITCH SOCKET OUTLETS

All socket outlets shall be double pole switched, shall comply with current BS 1363, and shall be rated at 13A and as manufactured by MK Electric Ltd. Logic Plus range mounted in the appropriate flush box to suit the accessory used. The Contractor shall ensure that all outlets for computer equipment are dual earth and shall be wired back to separate earth terminals within the new distribution board

All switch socket outlets shall be 30mA RCD protected.

DATA CABLING

The Electrical Contractor shall allow for the supply and installation of a flush back box and pvc conduit.

MECHANICAL SERVICES

The Electrical Contractor shall allow for wiring to and final connection of the following pieces of heating equipment, some of which are not supplied by him but have electrical connections:-

The Electrical Contractor shall consult with the mechanical services contractor with regards to exact location and manufacturer's literature for all pieces of equipment prior to their fixing.

CERTIFICATE and AS-FITTED DRAWINGS

The electrical contractor shall submit to the contract administrator a completion certificate (on serially numbered forms as issued by and bearing the logo of either the NICEIC or ECA) complete with full test results for the new installation, as-fitted drawings showing all cable routes and the location of all electrical switchgear and accessories and any guarantees, commissioning certificates or operating manuals that may be applicable to any part of the electrical installation or any piece of electrical equipment. Two sets of the information detailed above (one original and one copy) shall be presented to a representative of the Chief Estates and Property Services Manager's Department at the time of hand over, each bound in a hard backed lever arch folder marked with the project details.

INTRUDER ALARM

The electrical contractor shall allow in his tender for the supply, installation and commissioning of a new intruder alarm system as shown, with key holder facility.

FIRE ALARM

The electrical contractor is to allow for a new fire alarm system, with bio directional sounders. The accessories to be of a type which is electrically compatible with the existing system.

The electrical contractor is to allow for all chase marks and supply and installation of flush pvc conduits and standard back box's for the break glass point

At the fire alarm panel from the top of the panel the electrical contractor shall supply and install 2 no 20mm pvc flush conduits for fire alarm cable runs.

All detector and sounder circuit wiring is to be installed in fp200, minimum conductor size 1.5mm.

Square D split Board

- L1 External lights via TC 10amp type c mcb.
- L2 Main room 10amp RccD 30mA.
- L3 Main room and lobby 10amp RccD 30mA.
- L4 Staffroom, Toilet, Wc and Fans 10amp RccD 30mA.
- L5 Disabled help system 6amp type c mcb.
- L6 - L10 Spare.

Square D split Board

- P1 Intruder alarm 6amp type c mcb.
- P2 Fire alarm 6amp type c mcb.
- P3 Cooker 32amp RccD 30mA.
- P4 Cooker extraction 20amp RccD 30mA.
- P5 Fridge 20amp type b mcb
- P6 Ring main 32amp RccD 30mA.
- P7 Boiler 10amp type b mcb.
- P8 - P10 Spare

OWL/4000.

OWL/4000, Emergency Version..

LDLW/11 / 4K/M/SG, Emergency Version..

LDLFW/11 / 4K/M/FG, Emergency Version..

CCFOH/2400 / 4K/OP/B, EMERGENCY VERSION.

CCFOB/2400 / 4K/OP/B, Emergency Version..

EXSLR/M3/WH/E5L4.

Distribution board to be square d cat no KQA12512 split 24 way separate meter board complete with switch disco's and 2 number pulse meters.

MK Masterseal socket cat no 56482 GRY. I.

MK switched fused spur Cat No. K1060 D1 WHI ( dp with neon and red rockers

MK switched fused spur Cat No. K370 D1 WHI ( dp with neon, flex outlet and red rockers )

M.K switched 2 gang socket Cat No. K2746 d1 WHI

Friedland D914HG door chime kit.

intruder singal sensor detector

Single box for voice point

Single box for data point

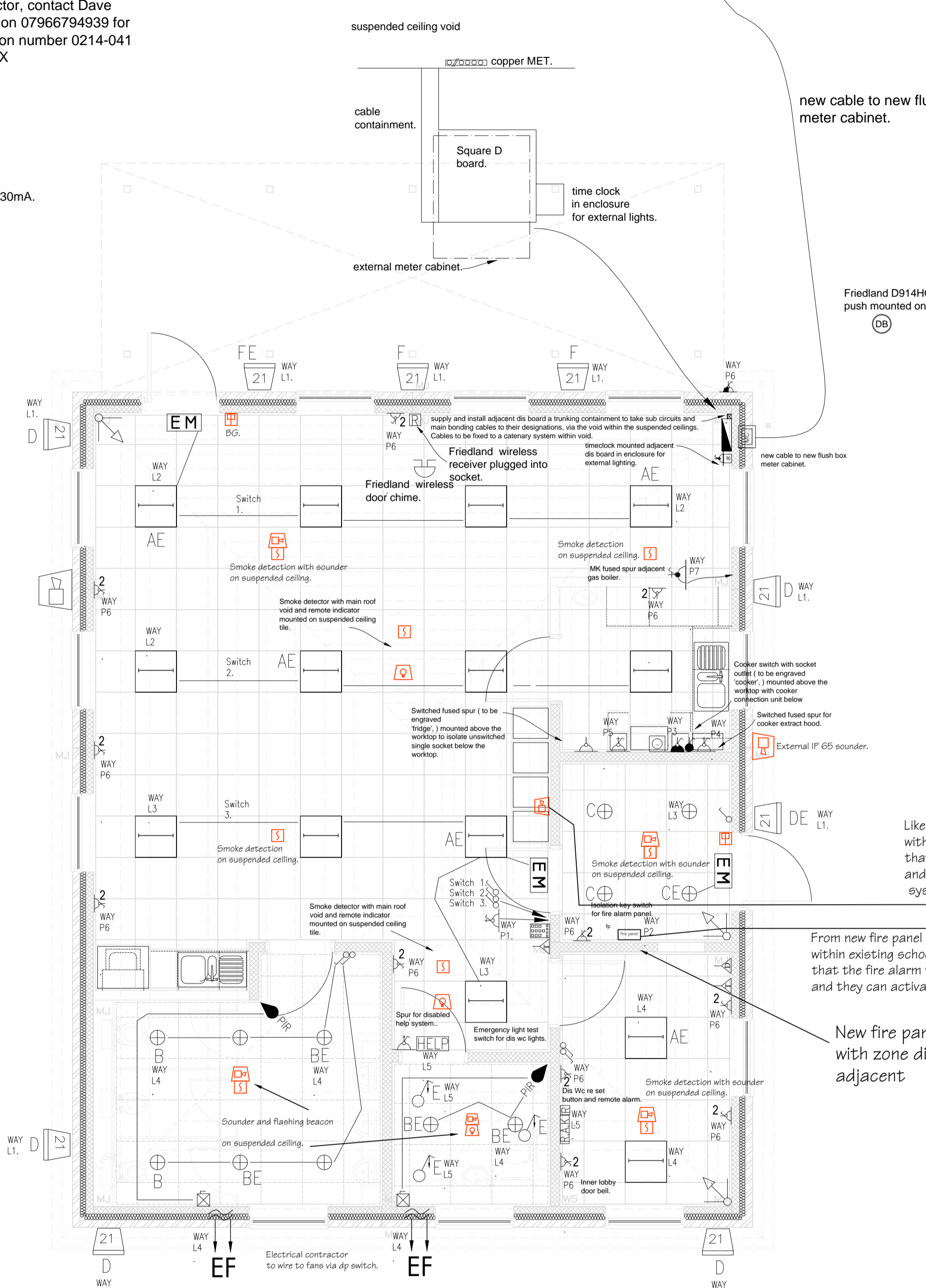
M.K cooker unit cat no K5061 WHI, mounted 150mm above worktop with cooker connection unit K5045 WHI below.

24/7 Smiths timeguard timeclock FST17A, to be complete with MK fused spur adjacent.

Key switch supply for fire alarm panel

Mk unswitched socket at low level cat no K780 WHI, with switched fused spur cat no K1060 D1 WHI 150mm above worktop for kitchen fridge.

Emergency lighting test switch MK within grid/plateswitch



new cable to new flush box meter cabinet.

Friedland D914HG wireless IP67 door push mounted on steel gate frame.

Friedland wireless receiver plugged into socket.

Likewise take fp200 cable to sounder within the new building, so they are aware that the fire alarm with the existing school has gone off and they can activate their new system.

From new fire panel take fp200 cable to sounder within existing school, so the existing school is aware that the fire alarm with the new build has gone off and they can activate their school system.

New fire panel with zone diagram adjacent

LIGHTING

The electrical contractor is to allow in his tender for the supply, delivery, erection and putting into operation of all the lighting fittings shown on the drawing, and/or as detailed in the equipment schedules.

The Electrical Contractor will be responsible for the testing of the fittings, together with the provision of all internal wiring or assemblies which may be required.

The actual position of lighting points will be finally decided on site but the positions shown on the drawings are considered accurate for tendering purposes.

The Electrical Contractor must accept the full responsibility for all breakages occurring whilst the fittings are stored on site, or after erection before acceptance by the client.

All fittings shall all be complete with lamps and 3500K fluorescent tubes as required.

All 2D lamps shall be 3500k colour temp lamps and all fluorescent tubes shall be white.

All circuits shall be switched locally, switches being installed in the positions as shown and at the heights previously stated. Key operated test switches shall be installed in the positions shown to test the emergency lighting.

For the external lighting supply and install a time clock adjacent dis board and programme to clients requirements.

EARTHING AND BONDING

Earthing and bonding shall be in accordance with the 17th edition of the I.E.E. wiring regulations with current amendments, supplementary bonding cables to be in 6mm<sup>2</sup>. Socket outlets to have dual earths wired back individually to earth terminals of dis board All bonding cables are to be terminated using a crimped terminal lug and all bonding clips shall be visible at all times. The electrical contractor shall supply and install 2 no 16mm green and yellow main equipotential bonds to the incoming gas and water positions. Install a copper MET with detachable link, fit circular ivory id labels to said cables. Run main 16mm bond cable in containment adjacent dis board to link side.

DEMOLITION WORKS

The Electrical Sub-Contractor shall allow for the removal of all redundant materials forming part of the existing installation where accessible and any making good where necessary.

Accessories to be flush mounted with 20mm galv conduit flush drop.


Notes:  
Do not scale dimensions from this drawing. Only figured dimensions are to be taken from this drawing.  
Check all dimensions on site before commencing any work or shop drawings.  
The contractor must report any discrepancies to the designer before commencing work. If this drawing exceeds the quantities taken in any way, the designer is to be informed before the work is initiated.  
Work within The Construction (Design and Management) Regulations 2007 is not to start until a Health and Safety Plan has been produced.

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**Project**  
Replace Preschool Mobile.

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**Drawing Title**  
Electrical Installation.

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<b>Project No.</b> 13364	<b>Issue Stage.</b> Tender.	<b>Drawing No.</b> EL(0) 01	<b>Rev.</b> XX
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<b>Contact</b> e-mail: paul.baumber@northlincs.gov.uk		<b>Date</b> Feb 2014	
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